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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,204	09/21/2001	Gintaras A. Vaisnys	10334/6	5152

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EXAMINER
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ART UNIT	PAPER NUMBER
1745	10

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

eb 10

Office Action Summary	Application No.	Applicant(s)	
	09/960,204	VAISNYS ET AL.	
	Examiner	Art Unit	
	Raymond Alejandro	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

This communication is responsive to the amendment filed 10/22/03. The 35 USC 102 rejection and the 35 USC 103 is herein maintained for the reasons of record. Thus, the claims are finally rejected.

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4, 6-7, 9-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Benvegar et al 5721482.

The instant application is directed to a battery pack wherein the disclosed inventive concept comprises the indicator feature.

With respect to claim 1:

Benvegar et al disclose an intelligent battery having an advance low battery warning for a battery powered device (ABSTRACT/COL 2, lines 27-45) wherein the battery comprises a battery suitable for powering a battery powered device and a charge monitor circuit. The battery powered device is a defibrillator device (ABSTRACT/COL 18-24). It is disclosed that the charge monitor IC 32 resides on a printed circuit board mounted inside a removable battery pack 12 that is used with the portable defibrillator (COL 4, lines 10-13). The battery powered device is a defibrillator device (ABSTRACT) as well as that the battery powered device is used to treat patients (COL 1, lines 20-24).

Benvegar et al disclose that the high voltage charger circuit 14 contains a large capacitor that is charged by battery pack 12, thereby arming the defibrillator. As will be appreciated by those skilled in the art, the large charge stored on this capacitor is used to shock the patient (COL 3, lines 30-35). *Thus, a second power supply is provided to power at least one-non energy delivery circuit of the battery pack and the external defibrillator.* **Figure 2** above illustrates a diagram of the battery pack 12 wherein the battery pack 12 has a plurality of battery cells 30 (*power supply*) connected in series across the terminals of the battery pack 12 (COL 3, line 65 to COL 4, line 10). *Thus, it is also contended that at least one of the plurality of battery cells can serve as the second power supply as not specific structure of the second power supplied is specified.*

The charge monitor circuit continuously measures the amount of electrical charge input and output from the battery (ABSTRACT/COL 2, lines 27-45). When the amount of charge remaining in the battery goes below a threshold amount an advance low battery warning is generated (ABSTRACT/ COL 2, lines 27-45). It is disclosed that the low battery warning occurs independently of the output voltage of the battery such that an advance low battery warning is provided (ABSTRACT/ COL 2, lines 27-45).

Figure 2 below illustrates a diagram of the battery pack 12 wherein the battery pack 12 has a plurality of battery cells 30 (*power supply*) connected in series across the terminals of the battery pack 12 (COL 3, line 65 to COL 4, line 10). Also contained within the battery pack 12 is the charge monitor IC 32 which monitors and maintains a cumulative sum of the electrical current as it goes in and out of the battery (i.e. battery cells 30). The amount of charge input into the battery and output from the battery is continuously measured by the charge monitor IC 32

(COL 3, line 65 to COL 4, line 10). It is disclosed that the charge monitor IC 32 resides on a printed circuit board mounted inside a removable battery pack 12 that is used with the portable defibrillator (COL 4, lines 10-13).

It is disclosed that the battery pack 12 (See ***Figure 2 below***) includes a button 34 and an LED bar graph 36 (it is noted that LED stands for light emitting diode). When the button 34 is pressed, charge monitor IC 32 activates LED bar graph 36 which indicates the total charge remaining in the battery cells 30 (COL 4, lines 39-43).

It is disclosed that the charge monitor IC 32 reports information, including the battery state of charge, the battery's temperature and the charge monitor's status including a plurality of calibration and testing flags to the defibrillator/monitor instrument (COL 4, lines 18-23).

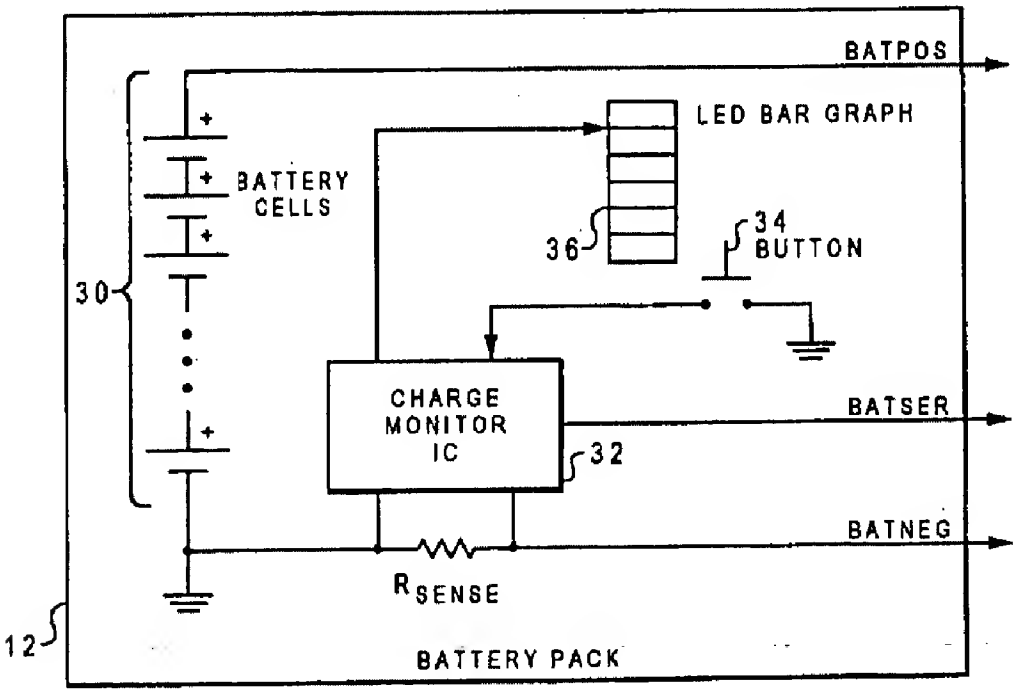

Fig. 2

With respect to claims 2-4:

It is disclosed that the battery pack 12 includes a button 34 and an LED bar graph 36 (it is noted that LED stands for light emitting diode). When the button 34 is pressed, charge monitor IC 32 activates LED bar graph 36 which indicates the total charge remaining in the battery cells 30 (COL 4, lines 39-43). *Thus, since the charge monitor IC 32 activates the LED bar graph 36, the LED bar graph 36 (the light emitting diode) flashes to indicate the battery cells are operating properly.*

As for claims 6-7, 10-11:

Benvegar et al disclosed that the control circuit is contained within and formed as an integral part of the battery pack, thus, providing an intelligent battery that produces an advance low battery warning for a battery powered defibrillator (COL 7, lines 50-55). It is disclosed that the control circuit 20 makes a determination of when the amount of charge remaining in the battery goes below a threshold amount, this threshold amount reflects the desired amount of charge to be remaining in a battery. When it is determined that the charge in the battery pack has reached this threshold amount, control circuit 20 provides an advance low battery warning by indicating the low battery condition on display 24 (COL 3, lines 42-55). The control circuit 20 may produce an audio warning that is output by speaker 26. Control circuit 20 also monitors the voltage output of battery pack 12 and when the voltage output reaches a minimum threshold limit, control circuit 20 provides an additional audio and visual warning via speaker 26 and display 24, called a battery shutdown warning which indicates the battery shutdown is imminent (COL 3, lines 55-63).

Figure 1 below *shows control circuit feature including the controller, the audio indicator and the enunciator.*

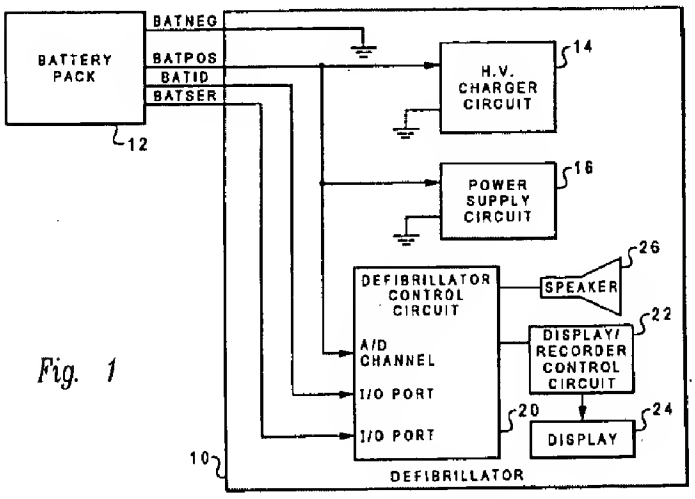

Fig. 1

With respect to claim 9:

It is disclosed that the battery pack 12 includes a button 34 and an LED bar graph 36 (it is noted that LED stands for light emitting diode). When the button 34 is pressed, charge monitor IC 32 activates LED bar graph 36 which indicates the total charge remaining in the battery cells 30 (COL 4, lines 39-43). *Thus, the indicator indicates a state of the power supply.*

With respect to claim 13:

It is taught that the low battery warning occurs independently of the output voltage of the battery such that an advance low battery warning is provided (ABSTRACT/ COL 2, lines 27-45).

Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benvegar et al 5721482 as applied to claims 3 and 16 above, and further in view of Kurle et al 6072299.

Benvegar et al is applied, argued and incorporated herein for the reasons above. However, Benvegar et al do not expressly disclose the light emitting diode flashes to indicate a fault condition.

Kurle et al disclose a smart battery (ABSTRACT) that self-monitors and indicates use conditions (ABSTRACT). Kurle et al disclose that a relative state of charge that includes a reserve factor is displayed using the LED (*the light emitting diode*) 76a-d wherein one LED flashes if the relative state of charge is less than or equal to 0 % (COL 14, lines 40-45). It is also disclosed that if any identified flag has been set, then the battery 22 displays the conditioning required pattern wherein the conditioning required display pattern alternates flashing the first and third LED (COL 14, lines 25-31).

Kurle et al disclose the battery pack is useful in portable medical devices such as a portable defibrillator unit (COL 1, lines 22-28) wherein the battery pack provides the power to the defibrillator (COL 1, lines 30-45).

In view of the above, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the light emitting diode flashes to indicate a fault condition of Kurle et al in the indicator of Benvegar et al because Kurle et al teach the light emitting diode indicator (LED) flashes if the relative state of charge is less than certain predetermined level. Accordingly, a flashing light emitting diode is suitable to identify, recognize and display battery conditions to a user. Thus, if any error and/or fault or failing condition is detected in the battery, the flashing-lighted LED (light emitting diode) display makes pertinent indication. As a result, it

is obtained a battery that internally monitors its own operating condition, its own need for maintenance and its own useful life, and communicates this information to a user.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benvegar et al 5721482 as applied to claims 1 and 14 above, and further in view of Olson et al 6366809.

Benvegar et al is applied, argued and incorporated herein for the reasons above. However, Benvegar et al do not expressly disclose the indicator communicates that the medical device has failed a self test per se.

Olson et al disclose a defibrillator battery with memory and status indication gauge (TITLE/ABSTRACT) wherein a daily self-test and a weekly self-test of the automated external defibrillator (AED) 10 is performed during which the voltage level of battery cells 17 of battery pack 15 is checked; wherein processor 74 illuminates replace battery indicator 64 of status gauge indicator 60 and activates alarm 96 if faults are identified during daily self-test or weekly self-test (COL 6, lines 47-62).

In view of the above, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the indicator communicates that the medical device has failed a self test of Olson et al in the indicator of Benvegar et al because Olson et al teach that the battery indicator is illuminated if fault conditions are identified during daily self-test and weekly self-test. Accordingly, the indicator will illuminate if a battery replacement is required. Therefore, the defibrillator battery and associated status indicator insures constant readiness of an automated external defibrillator for defibrillating a patient by preventing defibrillator failure due to an unknown reduced battery charge.

Response to Arguments

Applicant's arguments filed 10/22/03 have been fully considered but they are not persuasive. The main contention of applicants' arguments is premised on the assertion the prior art does not disclose or suggest "the second power supply for providing power to at least one non-energy delivery circuit of the battery pack and the external defibrillator". However, this assertion is respectfully disagreed with because Benvegar et al teaches that the high voltage charger circuit 14 contains a large capacitor (*the second power supply*) that is charged by battery pack 12, thereby arming the defibrillator. As will be appreciated by those skilled in the art, the large charge stored on this capacitor is used to shock the patient. *Thus, a second power supply is provided to power at least one-non energy delivery circuit of the battery pack and the external defibrillator.* In addition, **Figure 2** above illustrates a diagram of the battery pack 12 wherein the battery pack 12 has a plurality of battery cells 30 (*power supply devices*) connected in series across the terminals of the battery pack 12 (COL 3, line 65 to COL 4, line 10). *Thus, it is also contended that at least one of the plurality of battery cells can serve as the second power supply as not specific structure of the second power supply device is being specified.* Therefore, the burden is shifted to the applicants to show or demonstrate that neither the large capacitor nor (at least) one of the plurality of battery cells does perform the specific function as instantly claimed.

With respect to the indicator to automatically indicate a status of at least a portion of at least one of the first power supply, the second power supply and the external defibrillator, it is pointed that the prior art of record does reveal that the indicating feature indicates or illustrates at least a portion of at least the first power supply (i.e. any one of the plurality of batteries) and the

defibrillator device per se. Thus, the prior art reference provides the necessary functional interrelationship to satisfy the claimed requirement.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro
Examiner
Art Unit 1745

STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1700